120

Quality Control

Memo

March-19-13 10:52:24 AM Item ID: 646.4001 . Accept *N900040100* Setup Start Revision ID: Item Name: AS350 Cable Cutter Start Date: 3/19/13 Start Qty: 1.00 **Cust Item ID:** Required Date: 4/02/13 Reg'd Oty: 1.00 **Customer:** Reference: Run Process Plan: MLJ Date: 13-03-19 Tooling: **Approvals:** Date: Stop QC: _____ Date: SPC (Y/N): Date: Operation Sequence ID/ Set Up/ Tool ID Tool # Plan Accept Reject Reject Work Center ID Description Qty Qty Number Stamp **Run Hours** Code Draw Nbr **Revision Nbr** 646.4000 Α 100 DOCUMENT CONTROL *100* DC Memo Document Control Photocopy bluefile & type labels per PPP 646.4001 110 Pick Kit 0.00 *110* Packaging 0.00 Memo Packaging 120 QC4-100% Inspect kits for completeness

| | | | | | | • | | | | | DQA: | Date | : <u> </u> | |
|-------------------------|------------------------|------------|-------------------|----------|--------|-----------------------------|--|---|-------------------|------------|---------------|--------------------------|---------------------|--|
| NCR: Y | 'es | / No | | | | WORK ORDER NON- | COI | VFORM | MANCE / UPD | DATE | | | * · | |
| | | | | | | | | | | - | QA Closed: | Date | | |
| Work Orde | ŕ: | | | | | DISPOSITION | | AGAINST DEPARTMENT/PROCESS | | | | | | |
| Part N | - | | | | | Rework Scrap | | Skid-tube Crosstube Machining Small Fab | | | 1 | Water Jet d. Eng. Coor. | Engineering Quality | |
| NCR No. | | | | | | Work Order Update | Update Thermoforming Finishing Composite | | | | Rec/Stor | re/Packaging Supplier | Other | |
| Root | | | | | Descri | iption of work order update | П | initial | Acti | ion | Sign & | | | |
| Cause | | Date | Step | Qty | (| or Non-conformance | Ch | ief Eng | Descri | iption | Date | Verification | QC Inspector | |
| oc/Data | | | | | | | | | | | | | | |
| quip/Tooling | | | | | | | | | | | | | | |
| perator | | | | | | | | | | | | | | |
| Naterial | | | | | | | | | | | | | | |
| etup | | | | | | | | | | | | | | |
| ther | _ | | | | | | | | | | | | · | |
| rocess | | | | | | | | | | | | | | |
| upplier | | | | | | | | | | | | | | |
| raining | _ | | | | | | | | | | | | | |
| napproved | | | | | | | <u> </u> | | | <u></u> | | | <u> </u> | |
| | | | | | | | AUL | T CATE | GORY | | | | | |
| Landir | | ı | | | _ | General | _ | , | | _ | 7 | F | ٦ . | |
| | - | Bending | | | | Bend | \vdash | Grain | | <u> </u> | Ovalized | <u> </u> | Pressure/Forced | |
| | \neg | Centre No | t Concer | ntric to | o/s _ | BOM/Route | - | Hardwa | | | Over/Under | | Temperature/Cure | |
| 1 | - | Cracks | | | _ | Broken/Damaged | \vdash | 1 | on Incomplete | . - | Part Incorred | <u> </u> | Weld | |
| 1 | - | | hed/Crimped Burrs | | | | | ł | ions Incomplete/U | Inclear | Part Lost/Mi | ssing | Wrong Stock Pulled | |
| | Cuffs Contamination | | | | | | - | Mainte | | | Part Moved | | | |
| | Heat Treat Countersink | | | | | | - | Mislabe | | ļ | Positioned W | | 7 | |
| | | | | | | Cut Too Short | \vdash | Misread | 1 | | Power Loss/S | Surge | Other | |
| | - | Ripples in | | | | Drill Holes | \vdash | Offset | | | | | | |
| 1 | _ | Torque W | | | n _ | Drawing | Out of Calibration | | | | | · | | |
| Turning Sequence Finish | | | | | | | Out of Sequence | | | | | | | |
| · | | Wave/Tw | ist in Tub | e | 1 | Folio | | Outside | Dimensions | | | | | |

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Quality Control

March-19-13 10:52:24 AM Item ID: 646.4001 Accept *N900040100* Setup Start **Revision ID:** Item Name: AS350 Cable Cutter *1* Start Oty: 1.00 Start Date: 3/19/13 **Cust Item ID:** Required Date: 4/02/13 Req'd Qty: 1.00 **Customer:** Reference: Run Process Plan: Date: Tooling: Approvals: Date: Stop QC: _____ Date: SPC (Y/N): Date: Sequence ID/ Operation Set Up/ **Tool ID** Tool # Plan Accept Reject Reject Insp. **Work Center ID** Description Code Qty Qty Number Stamp **Run Hours** 130 0.00 Packaging *130* Packaging 0.00 Memo Packaging Identify and pack for shipping as per PPP 646.4001 Location: 140 QC21- Final Inspection - Work Order Release 0.00 *140* QC 0.00 Memo

U 1304-17

| | | | | | | | | | | DQA: | Date: | 4 |
|--------------------------|-----------------------------------|----------|-------------|----------|---|-----------|-------------------|-------------------|-----------------|----------------|---------------|--------------------|
| NCR: Y | es / No | | | | WORK ORDER NON-C | CON | 1FORI | MANCE / UPI | DATE | | | • |
| | | <u>.</u> | | | ····· | | | | | QA Closed: | Date: | |
| Work Orde | - | | | | DISPOSITION | | | | | | | |
| Work Order | · · | | | | Rework | Skid-tube | Crosstube | 1 | Water Jet | Engineering | | |
| Part N | 0. | | | | Scrap | 1 | | Machining | Small Fab | Pro | d. Eng. Coor. | Quality |
| | | | | | · · · · · · · · · · · · · · · · · · · | | | | Finishing | Rec/Stor | e/Packaging | Other |
| NCR N | o | | | | Work Order Update |] | | Large Fab | Composite | | Supplier | . [] |
| | | | - | | | | - '4' - 1 | A -4 | | C: 0 | <u> </u> | <u> </u> |
| Root | D-4- | C+ | <u></u> | | ption of work order update or Non-conformance | 1 | nitial ief Eng | 1 | tion ription | Sign & Date | Verification | QC Inspector |
| Cause | Date | Step | Qty | | or Non-conformance | Cn | iei Eng | Descr | приоп | Date | | QC Inspector |
| oc/Data quip/Tooling | - | | | | | | 1 | | | | ± | |
| perator | ┪ | 1 | | | | | ľ | | | | | |
| Material | 1 | ļ | | | | | | | | | | |
| etup | ┥ | Į . | | | | | | | | | | |
| Other | | | | | | | ļ | | | | | į |
| rocess | 7 | | | | | | ļ | | | | * . | |
| Supplier | | | | | | | | | | | | |
| raining | | 1 | | | | | | ĺ | | | | |
| Inapproved | | <u> </u> | <u> </u> | | | | | | 4 | | | |
| | | | | | F. | AUL | T CATE | GORY | | | | |
| Landin | g Gear | | | | General | | | | | 7 | | - |
| _ | Bending | | | | Bend | \vdash | Grain | | | Ovalized | | Pressure/Forced |
| - | Centre N | ot Conce | ntric to | o/s | BOM/Route | Н | Hardwa | | <u> </u> | Over/Under | | Temperature/Cure |
| - | Cracks | | | _ | Broken/Damaged | Н | • | ion Incomplete | _ | Part Incorred | | Weld |
| - | Crushed/Crimped Burrs | | | | | Н | 4 | ions Incomplete/U | Jnclear | Part Lost/Mi | ssing | Wrong Stock Pulled |
| - | Cuffs | | | | | Н | Mainte | | ļ | Part Moved | | |
| | Heat Trea | | | <u> </u> | Countersink | \vdash | Mislabe | | | Positioned V | | 1 |
| Inspection Strip in Tube | | | | | Cut Too Short | \vdash | Misread | i | . <u>L</u> | Power Loss/ | surge | Other |
| ļ | Ripples ir | | | \vdash | Drill Holes | \vdash | Offset | | | | | |
| 1 | Torque Waves in Extrusion Drawing | | | | | | 4 | Calibration | | | | |
| | Turning Sequence Finish | | | | | | Out of Sequence | | | | | . ' |
| ļ | Wave/Twist in Tube Folio | | | | | | Outside | Dimensions | | | | |

Work Order ID: 98640

98640

Parent Item:

646.4001

646 4001

Parent Item Name: AS350 Cable Cutter

Start Date: 3/19/13

Required Date: 4/02/13

Page 1

Start Qty: 1.00

Required Qty: 1.00

| | | | | | | | | | Start Qty: 1.00 | Kequire | a Qty: 1.00 |
|---|------------------------|---------------|------|---------------------|------------------|-----------------|--------------------|----------------|-----------------|-------------------------|-----------------------|
| Comments: IP | P REV:A 12.10. | 23 NEW ISSUE | DD | VERF:JLM | | | | | | | |
| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Qty per Kit | Total Qty Qty Issued | Date Status Issued |
| *646.3301 | * 240 | Manufactured | No | | | | Each | 0.0000 | ** (6 | W)2200 | F3 282 |
| *646.3001 *646-3001 Lower Cutter Assembly | * SP | Manufactured | No | | | | Each | 0.0000 | ** | D) M)250 | 83 & \$ |
| *646.2910 *646.2910 Deflector | SHP | Manufactured | No | | | | Each | 0.0000 | ** | MIZOUF | 3 6 8 |
| *646.3810 *646.3810 Bracket | * SM | Manufactured | No | | | | Each | 0.0000 | ** | 2) M126U8 | -3 6 5 |
| *646.3510 *646.3510* Strut | i SMO | Manufactured | No | | | · | Each | 0.0000 | ** | m/25Uf | 3 L XZ |
| *646.3511 *646-354-12* Strut | Smo | Manufactured | No | | | | Each | 0.0000 | ** | 1) 7/1/2608 | 36 82 |
| *646.3512 *646.3512* Strut | 500 | Manufactured | No | | | | Each | 0.0000 | ** | M1250f | 3 6 35 |
| *646.3513 *646.3513* Strut | s Sh | Manufactured | No , | | | | Each | 0.0000 | ** | m125083 | [13/4/p] |

| NCD. | V | , | NI. |
|------|-----|---|-----|
| NCR: | Yes | 1 | No |

DQA: ____ Date: ____

| NCR: Y | es / No | | | | WORK ORDER NON- | CONFOR | INIAINCE / UP | DATE | QA Closed: | Date | : | |
|--|---|---------------------|------------|----------|----------------------------|------------------------------------|------------------------------------|-------------------------------------|--------------|--------------------------------------|---|--|
| Work Orde | ŕ: | | | | DISPOSITION | | 1 11 12 14 14 14 | AGAINST DE | PARTMENT | /PROCESS | | |
| Part N | | | | | Rework Scrap Use-as-is | Thor | Skid-tube Machining moforming | Crosstube Small Fab Finishing | - i | Water Jet d. Eng. Coor. re/Packaging | Engineering Quality Other | |
| NCR N | 0 | · | | | Work Order Update |] The | Large Fab | Composite | | Supplier | d other | |
| Root | | | | Descri | ption of work order update | Initial | Ac | tion | Sign & | | , | |
| Cause | Date | Step | Qty | | or Non-conformance | Chief En | g Desc | cription | Date | Verification | QC Inspector | |
| Doc/Data | _ | | | | | | | | | | | |
| quip/Tooling | _ | } | 1 | | | | | | | | | |
| Operator | - | | | | | | | | | | | |
| Material | - | | | | , | | | | | | | |
| Setup | | | | | | | | | | | | |
| Other Process | - | | | | | | | | | | | |
| Supplier | \dashv | | | | | | | | | | | |
| Fraining | ╡ | | | | | | | | İ | | | |
| Jnapproved | | | | | | | | | | | | |
| <u></u> | <u>, l , ,, , , ,, ,, ,, ,, ,, ,, ,, ,, ,, </u> | I | | | F | AULT CAT | EGORY | | | - | | |
| Landin | g Gear | | | | General | | | | _ | | <u>·</u> | |
| | Bending | | | | Bend | Grain | | | Ovalized | | Pressure/Forced | |
| | Centre No | ot Conce | ntric to C |)/s | BOM/Route | Hardw | are | <u> </u> | Over/Under | tolerance | Temperature/Cure | |
| | Cracks | | | _ | Broken/Damaged | — | tion Incomplete | <u> </u> | Part Incorre | <u> </u> | Weld | |
| 1 | Crushed/ | Crimped | | <u> </u> | Burrs | | ctions Incomplete/ | 'Unclear | Part Lost/Mi | issing | Wrong Stock Pulled | |
| | | Cuffs Contamination | | | | | tenance | <u> </u> | Part Moved | | | |
| į | Heat Treat Countersink | | | | | Mislat | | - | Positioned V | | ٦ | |
| | Inspection Strip in Tube Cut Too Short | | | | | | ad | | Power Loss/ | Surge | Other | |
| Ripples in Bend Drill Holes | | | | | | | Offset | | | | | |
| Torque Waves in Extrusion Drawing Turning Sequence Finish | | | | | | \vdash | Out of Calibration Out of Sequence | | | | | |
| Turning Sequence Finish Wave/Twist in Tube Folio | | | | | | Out of Sequence Outside Dimensions | | | | | · — · · · · · · · · · · · · · · · · · · | |
| | wave/twist in Tube Folio Outside Dimensions | | | | | | | | | | | |

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Picklist Print

March-19-13 10:52:30 AM

Work Order ID: 98640

Parent Item:

646.4001

Parent Item Name: AS350 Cable Cutter

98640 *646 4001*

NAS1149F0332P

Purchased

Purchased

No

No

Start Qty: 1.00 Each

10,454.00

Start Date: 3/19/13

Required Date: 4/02/13

Required Qty: 1.00

| Location | Loc Qty | Loc Code |
|-----------------|---------|-----------|
| GA | 182 | |
| 122063 | 182 | |
| ST294 | 269 | |
| 122063 | 269 | |
| ST295 | 3 | |
| 123352 | 3 | |
| st510 | 10000 | |
| 123900 | 10000 | |
| | Each | 6,289.000 |
| | | ** |

MS21042L3

| Locatio | <u>n</u> | Loc Oty | Loc Code |
|---------|----------|---------|----------|
| FP001 | | 3 | |
| | 122141 | 3 | |
| GA | | 212 | |
| | 122452 | 212 | |
| ST314 | | 268 | |
| | 117885 | 32 | |
| | 119017 | 55 | |
| | 119075 | 138 | |

43

5806

1806

4000

123900

123265

123900

124291

ST506

| | | | | | | | | | | | DC | QΑ: _ | Date: | |
|-------------------|------------------------------|------------|------------|------------|------------|--|---|----------|------------------------|---|--------------------|---------------|---------------------------|--------------------|
| NCR: | Yes | / No | | | | WORK ORDER NON-C | OI | NFORM | MANCE / UP | DATE | | | | |
| | | | | <u>.</u> , | | | | | | | QA Close | ed: | Date: | |
| Work Orde | er: | | | | | DISPOSITION | | | | AGAINST DE | DEPARTMENT/PROCESS | | | |
| Part No. NCR No. | | | | | | Rework Scrap Use-as-is Work Order Update | Scrap Machining Small Fab Use-as-is Thermoforming Finishing | | Small Fab Finishing | Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier | | d. Eng. Coor. | Engineering Quality Other | |
| | • | | | | | | J | | | | 1 | | | |
| Root | | | | | Descri | ption of work order update | | Initial | Ac | ction | Sign & | ı l | | |
| Cause | 1 | Date | Step | Qty | | or Non-conformance | Cł | nief Eng | Desc | ription | Date | | Verification | QC Inspector |
| Doc/Data | | | | | | | | | | | | | | |
| Equip/Tooling | | | | | 1 | | | | | | | | | |
| Operator | | | | | | | | | | | | | | |
| Material | Ш | | | | | | | | | | | | | |
| Setup | Ш | | | | | | ļ | | | | | Ì | | |
| Other | | | | | | | | | | | | | | |
| Process | Ш | | | | | | | | | | | | | |
| Supplier | Ц | | | | | - | l | | | | | - 1 | | |
| Training | | ! | ļ ; | | | | | | | | | | Ŷ. | |
| Unapproved | | | | | | | | | | | <u> </u> | | | |
| | | | | | | | AUI | LT CATE | GORY | | | | | |
| Landi | | | | | | General | | 7 | | _ | 1 | | · · | |
| | ${f H}$ | Bending | | | | Bend | | Grain | | | Ovalized | | | Pressure/Forced |
| • | Centre Not Concentric to O/S | | | | | BOM/Route | <u> </u> | Hardwa | | <u> </u> | Over/Un | | | Temperature/Cure |
| | Cracks | | | | | Broken/Damaged | <u> </u> | -i ' | on Incomplete | • | Part Inco | | · — | Weld |
| Crushed/Crimped | | | | | <u> </u> _ | Burrs | \vdash | -1 | ions Incomplete/ | /Unclear | Part Lost | | ssing | Wrong Stock Pulled |
| | Cuffs | | | | | Contamination | _ | Mainte | | | Part Mov | | | |
| | Heat Treat | | | | | Countersink | ntersink! | | | | Positioned Wrong | | | |
| 1. | | Inspection | n Strip in | Tube | | Cut Too Short | 1 | Misread | ı | | Power Lo | ss/S | Surge | Other |

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Picklist Print

March-19-13 10:52:30 AM

Work Order ID: 98640

98640

Parent Item:

646.4001

646 4001

Parent Item Name: AS350 Cable Cutter

Start Date: 3/19/13

Required Date: 4/02/13

Start Oty: 1.00

Required Qty: 1.00

Manufactured Each 10.0000 Location Loc Qty Loc Code ST139B 10 92768 10 646.3710 0.0000 Manufactured Each Doubler 646.3210 No 0.0000 Manufactured Each ** Support 646.3713 No 0.0000 Manufactured Each ** MS24694-S51 Purchased No Each 196.0000 *M\$24694-\$51* ** Screw Location Loc Qty Loc Code ST303 196 116805 123741 195 AN3-13A Purchased No Each 106.0000 ** Location Loc Qty Loc Code ST351 56 104746 26

March-19-13 10:52:30 AM

Shop Packet Print

30

50

50

120910

123759

ST512

Page 3

| | | | | | | | | | | DQA. | | rte | | |
|-----------------------------------|------------------|-------------|---------------------------------------|----------------|----------------------------|-----------------|----------------------------|-------------------|----------------|---------------------|---------------------------------------|-----------------------|---------------------------------------|--|
| NCR: Y | es / No | | | | WORK ORDER NON- | CONF | ORN | MANCE / UP | DATE | OA Classel |) 0- | | • | |
| | | | | | T | - 1 | | | | QA Closed: | J Da | te: | | |
| Work Orde | ŕ. | | | | DISPOSITION | | AGAINST DEPARTMENT/PROCESS | | | | | | | |
| Work Orde | ·· | | · · · · · · · · · · · · · · · · · · · | | Rework | 7 | Skid-tube Crosstube | | | 1 | Water Jet | | Engineering | |
| Part N | o. | | | | Scrap | 1 [| Machining Small Fab | | | Prod. Eng. Coor. | | | Quality | |
| | | | | · · · · · · | Use-as-is | 1 TI | Thermoforming Finishing | | | Rec/Store/Packaging | | | Other | |
| NCR N | o | | | | Work Order Update |] | | Large Fab | Composite | | Supplier | | | |
| Root | 1 | 1 | | Descri | ption of work order update | Initi | al I | Act | tion | Sign & | | · | • | |
| Cause | Date | Step | Qty | | or Non-conformance | Chief | 1 | i | ription | Date | Verificatio | n | QC Inspector | |
| Doc/Data | | | | | | | | | | | | | | |
| quip/Tooling | 7 | | | | | | | | | | | | | |
| Operator | | | | | | | | | | <u> </u> | | | | |
| Material | | | | | | | | | | | i | | | |
| Setup | | | | | · | | | | | | | | , | |
| Other | | İ | | | | | | | | | | | | |
| rocess | | | | | | | | | | | * | | · · | |
| Supplier | | | | | | | | | | | | | *** | |
| Fraining | _ | | | | | | | | | | | | · . | |
| Jnapproved | | <u> </u> | | | | | | | | | | | | |
| | | | | | | AULT C | ATEC | GORY | | | | | | |
| Landin r | g Gear | | | _ | General | | | | | 155 | A | | | |
| <u> </u> | Bending | | | | Bend | Gra | | | <u> </u> | Ovalized | | $\boldsymbol{\vdash}$ | ressure/Forced | |
| ļ | Centre No | ot Concei | ntric to (| ^{D/S} | BOM/Route | \vdash | rdwai | | ļ | Over/Under | | — | emperature/Cure | |
| ļ | Cracks | | | - | Broken/Damaged | \mathbf{H} | - | on Incomplete | | Part Incorred | | \vdash | Veld | |
| } | Crushed/ | Crimped | | | Burrs | _ | | ions Incomplete/(| | Part Lost/Mi | ssing | LJ∨ | Vrong Stock Pulled | |
| } | Cuffs | | | | Contamination | _ | | nance | - | Part Moved | | | | |
| - | Heat Treat | | | | Countersink | | slabe! | | · | Positioned V | - | <u>г</u> | | |
| Inspection Strip in Tube | | | | Cut Too Short | ₩. | sread - | | | Power Loss/ | Surge | | Other | | |
| | | | | | Drill Holes | \vdash | set | | | | | | | |
| Torque Waves in Extrusion Drawing | | | | | - | — | | Calibration | | | , , , , , , , , , , , , , , , , , , , | | · · · · · · · · · · · · · · · · · · · | |
| 1 | Turning Sequence | | | | Finish | Out of Sequence | | | | | | | | |
| | Wave/Tw | ist in Tul | oe e | | Folio | Ou | tside | Dimensions | | | | | | |

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Order ID: 98640

Parent Item:

646,4001

Parent Item Name: AS350 Cable Cutter

98640

646 4001

Location

ST350

ST512

Location

Location

·ST329

Start Date: 3/19/13

Required Date: 4/02/13

Start Oty: 1.00

Required Qty: 1.00

Purchased

No

120308

122814

124858

Each 651,0000

Loc Code

Purchased

No

123900

333 120770 200 133

Loc Qty

Loc Qty

Loc Qty

Each

300

318

80

38

200

Each 300.0000

MS20470AD5-5.5

Purchased

Manufactured

No

123785

300 Each 813.0000

Loc Code

Loc Code

M\$20470AD5-5-5

Manufactured

ST336 813 123425 813 0.0000 Each

0.0000

125683

Clip

| | | | | | | | | | | DQA: | Date: | * | |
|---------------------------|------------|-----------|----------|----------|--|--------------|--|-------------------|----------|---------------|---|---------------------------|--|
| NCR: Y | es / No | | | | WORK ORDER NON-C | CON | IFOR | MANCE / UP | DATE | 04.61 | | ., | |
| | | | | | | | QA Closed: Date: | | | | | | |
| Work Orde | r: | | | | DISPOSITION | | AGAINST DEPARTMENT/PROCESS | | | | | | |
| Part No | | | | | Rework Scrap Use-as-is Work Order Update | | Skid-tube Crosstube Machining Small Fab Thermoforming Finishing Large Fab Composite | | | 4 | Water Jet d. Eng. Coor. re/Packaging Supplier | Engineering Quality Other | |
| Root | | | | Descri | ption of work order update | | nitial | Act | tion | Sign & | | | |
| Cause | Date | Step | Qty | | or Non-conformance | Ch | ief Eng | Desci | ription | Date | Verification | QC Inspector | |
| Ooc/Data quip/Tooling | | | | | | | | | | | | | |
| perator | | | | | | | | | | | | | |
| /laterial | | | | | | 1 | | | | | | | |
| etup | | | | | | | | | | | | | |
| Other | _ | | | | | | | | | | | | |
| rocess | _ | | | | | | | | | | | | |
| upplier | | | | | | | | | | | | | |
| raining | _ | ŀ | | | | | | | | | | | |
| Inapproved | | <u> </u> | | | | | | | | | | | |
| | × | | | | | AUL | T CATE | GORY | | <u> </u> | <u></u> | · | |
| Landin | _ | | | | General | | | | _ | 7 | | 1 | |
| - | Bending | | | . | Bend | \vdash | Grain | | ļ | Ovalized | . — | Pressure/Forced | |
| <u> </u> | Centre N | ot Concei | ntric to | o/s | BOM/Route | - | Hardwa | | ļ | Over/Under | | Temperature/Cure | |
| | Cracks | | | - | Broken/Damaged | \vdash | | on Incomplete | | Part Incorred | | Weld | |
| 1 | Crushed/ | Crimped | | <u> </u> | Burrs | - | | ions Incomplete/l | Unclear | Part Lost/Mi | ssing | Wrong Stock Pulled | |
| Cuffs | | | | | Contamination | \vdash | Mainte | | | Part Moved | | | |
| Heat Treat | | | | | Countersink | \vdash | Mislabe | | _ | Positioned V | · - | 1 | |
| Inspection Strip in Tube | | | | | Cut Too Short | \mathbf{H} | Misread | I | <u>L</u> | Power Loss/ | Surge | Other | |
| | Ripples in | | | · | Drill Holes | \vdash | Offset | | | | | | |
| Torque Waves in Extrusion | | | | | Drawing | | Out of Calibration | | | | | | |

Out of Sequence

Outside Dimensions

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence

Wave/Twist in Tube

Finish Folio

Work Order ID: 98640

98640

Parent Item:

646.4001

646 4001

Parent Item Name: AS350 Cable Cutter

Start Date: 3/19/13

Required Date: 4/02/13

Start Qty: 1.00

**

Required Qty: 1.00

646.3811

AN3-6A

Purchased No

Manufactured

483.0000 Each

0.0000

Each

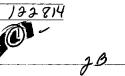
Each

Each

| Location | Loc Qty | Loc Code |
|-----------------|---------|----------|
| ST350 | 300 | |
| 124296 | 300 | |
| ST351 | 61 | |
| 117441 | 34 | |
| 121166 | 13 | |
| 122993 | 10 | |
| 123831 | 4 | |
| ST512 | 122 | |
| 122814 | 122 | |

MS24694-S55

Purchased No **



Screw



| Location | Loc Qty | Loc Code |
|----------|---------|----------|
| ST303 | 119 | |
| 123758 | l | |
| 124296 | 118 | |
| | Each | 0.0000 |





Filler 646.3714

Manufactured

0.0000

119.0000

| | | | | | | | | | | | DQA: | Date: | | |
|--|--|-----------|----------|------|--------|----------------------------|-------------|----------|------------------------|------------------|---------------|-------------------------|---------------------------|--|
| NCR: | , | | | | | | | | | | | | • | |
| | | | | | | | | | | | QA Closed: | Date: | <u> </u> | |
| Work Orde | ٠r٠ | | | | | DISPOSITION | | | A | GAINST DE | PARTMENT, | /PROCESS | | |
| Part N | - | | | | | Rework Scrap Use-as-is | | r | Machining Sn | osstube mall Fab | | Water Jet d. Eng. Coor. | Engineering Quality Other | |
| NCR I | ۱o. ₋ | | | | | Work Order Update | | | ~ | mposite | necy stor | Supplier | | |
| Root | | | | | Descri | ption of work order update | | nitial | Action | | Sign & | | | |
| Cause | | Date | Step | Qty | (| or Non-conformance | Ch | ief Eng | Description | n | Date | Verification | QC Inspector | |
| Doc/Data | | | | | | | | | | | | | | |
| Equip/Tooling | | | | | | | | | | | · | | | |
| Operator | | | | | | | | | | | | | | |
| Material | | | | | | | | | | | | | , | |
| Setup | | - | | | | | | | | | | | | |
| Other | | | 1 | | | | | | | | | | , | |
| Process | | | <u> </u> | | | | | | | | | · | . • • • • | |
| Supplier | | | | | | | l | | • | | | | | |
| Training | | | • | | | | | | | | | | | |
| Unapproved | | | | | | | | | | | | | | |
| | | | | | | <u> </u> | AUL | T CATE | GORY | | | | | |
| Landi | ng G | iear | | | | General | | | | | • | · | • | |
| Bending Bend | | | | | | | | Grain | | <u> </u> | Ovalized | | Pressure/Forced | |
| Centre Not Concentric to O/S BOM/Route | | | | | | BOM/Route | | Hardwa | re | | Over/Under | tolerance 🕖 | Temperature/Cure | |
| Cracks Broken/Da | | | | | | Broken/Damaged | | Inspecti | on Incomplete | | Part Incorred | t | Weld | |
| Crushed/Crimped Burrs | | | | | | Burrs | | Instruct | ions Incomplete/Unclea | ar | Part Lost/Mi | ssing | Wrong Stock Pulled | |
| | | Cuffs | | | | Contamination | Maintenance | | | | Part Moved | | | |
| | | Heat Trea | ıt | | | Countersink | Mislabeled | | | Positioned W | | | | |
| | Inspection Strip in Tube Cut Too Short | | | | | | | Misread | j | | Power Loss/S | Surge | Other | |

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Picklist Print

March-19-13 10:52:30 AM

Work Order ID: 98640

98640

Parent Item:

646.4001

646 4001

Parent Item Name: AS350 Cable Cutter

Start Date: 3/19/13

Required Date: 4/02/13

Start Qty: 1.00

Required Qty: 1.00

MS20470AD5-6

Purchased

No

Each 1.836.000

MS20470AD5-6

Location ST336

Loc Qty 1836 946

Each

890

Loc Code

105433

,646.3812

Manufactured

105433

124089

0.0000

No Purchased

Each

408.0000

Loc Code

Location ST350 123831 Loc Qty 408

108 200

**

123831

646.3813

Manufactured No

124221 124552

93252

100 Each

10.0000

Location ST139d

Loc Qty 10

10

Loc Code

93252





| NCR: | CR: Yes / No WORK ORDER NON-CONFORMANCE / UPDATE QA Closed: Date: | | | | | | | | | | | | | |
|---|--|----------|------------|---------|--------|---|-----|--|---|---|---|---|--|--|
| | | | | | | DISPOSITION | | | | AGAINST DE | | | • | |
| Work Orde Part N NCR N | 10. | | | | | Rework Scrap Use-as-is Work Order Update | | Therm | Skid-tube Machining noforming Large Fab | Crosstube Small Fab Finishing Composite | Pro | Water Jet d. Eng. Coor. re/Packaging Supplier | Engineering Quality Other | |
| Root | | | | | Descri | ption of work order update | | Initial | Act | ion | Sign & | | | |
| Cause | | Date | Step | Qty | (| or Non-conformance | Ch | nief Eng | Descr | iption | Date | Verification | QC Inspector | |
| Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved | | | | | | | | | | | | | | |
| ļ | | | | | | | AUI | LT CATE | GORY | | | | | |
| Centre Not Concentric to O/S Cracks Crushed/Crimped Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend | | | | | | General Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes | | Instruct Mainte Mislabe Misread Offset | ion Incomplete ions Incomplete/U enance eled | | Ovalized Over/Under Part Incorred Part Lost/Mi Part Moved Positioned W Power Loss/S | ct ssing | Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other | |
| 1 | | Torque W | raves in E | xtrusio | n [| Drawing | | Tont of (| Calibration | | | | | |

Out of Sequence

Outside Dimensions

Date: _

DQA:

Turning Sequence

Wave/Twist in Tube

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Order ID: 98640

646.4001

Parent Item Name: AS350 Cable Cutter

98640 *646 4001*

Location

106578

123785

124231

124259

124561

ST327

Start Date: 3/19/13

Required Date: 4/02/13

Start Otv: 1.00

Required Qty: 1.00

MS21047-3

Parent Item:

Purchased

Purchased

No

No

Location Loc Oty ST316 625 123268 75 123301 50 123522 500

Each

1,100.000

625.0000

Loc Code

Rivet, Cherry

AN3-5A

CCR264SS3-02

Purchased

No

100 600 200 200 Each

800

Loc Oty

1100

Each

1,096.000

**

Loc Code

| Location | <u>n</u> | Loc Qty | Loc Code |
|----------|----------|---------|----------|
| FP001 | | 32 | |
| | 122800 | 32 | |
| GA | | 120 | |
| | 117423 | 120 | |
| ST350 | | 22 | |
| | 120187 | 22 | |
| ST512 | | 922 | |
| | 122416 | 122 | |

| | | | | | | | | | | | | DQA: | Dai | te: | |
|--|--|-----------|----------|----------|----------------|--------------------------------|------------|---------|---------------------|------------------------|------------------|---------|--------------------------|-----|-----------------------|
| NCR: | /es | / No | | | | WORK ORDER NON-C | 100 | NFOR | MANCE / UP | DATE | | | | • | • |
| | | | | | | | | | | · · · · · · | QA C | losed: | Dat | te: | · |
| Work Orde | or. | | | | | DISPOSITION | | | | AGAINST DE | PARTI | MENT, | /PROCESS | | |
| , voin ord | -•• | | | | | Rework | | | Skid-tube | Crosstube |] | | Water Jet | | Engineering |
| Part I | ۱o. | | | | | Scrap |] | 1 | Machining | Small Fab |] | | d. Eng. Coor. | | Quality |
| NCR I | ۷o. | | | | | Use-as-is Work Order Update | | Thern | noforming Large Fab | Finishing Composite | Re | c/Sto | re/Packaging Supplier | _ | Other |
| | _ | | | | 1 5 . | <u> </u> | | | T | | I c:- | . 0 | | | |
| Root | | ٠. | | ١ | i | ption of work order update | | Initial | | ction | | n & | Manification | | OC Inchestor |
| Cause | Date Step Qty or Non-conformance | | | | | | | ief Eng | Desc | cription | l Di | ate . | Verification | 1 | QC Inspector |
| Doc/Data | | | 1 | | | | } | | · | | | | | | |
| Equip/Tooling | | |] | | | | | | ĺ | | | | | | |
| Operator | | | | | ļ. | | | | | | | | | | |
| Material | | | | | | | | | | | | | | | |
| Setup | | | | | | | | | | | | | | | |
| Other | | | Ì | | | | | | | | | | | | |
| Process | | <u> </u> | | | | | | | | | | | | | |
| Supplier | ┝ | | | | | | | | | | 1 | | | | |
| Training | ├ | ĺ | | | | | | | | | | | | | |
| Unapproved | _ | <u> </u> | <u> </u> | l | L | | <u> </u> | T CATE | COPY | | <u> </u> | | | | |
| Landi | na (| Soor | | | | General | AUL | .i ÇATE | GONT | | | | | | |
| Lanui | | Bending | | | _ | Bend | \Box | Grain | | | Ovaliz | ned . | I | | Pressure/Forced |
| Centre Not Concentric to O/S BOM/Route | | | | | | | \vdash | 4 | uro. | | - | | tolerance | | Temperature/Cure |
| | | Cracks | or conce | itile to | ^{0/3} | Broken/Damaged | | | | | -1 | ncorre | | | Weld |
| | _ | Crushed/ | Crimpod | | <u> </u> | Burrs | - | 4 | tions Incomplete/ | /Unclear | - | .ost/Mi | | | Wrong Stock Pulled |
| | \vdash | Cuffs | cimped | | <u> </u> | Contamination | \vdash | Mainte | • | - Circical | Part N | | JJ116 | | TTTOING STOCK I WINEW |
| | \vdash | Heat Trea | ·+ | | - | Countersink | Mislabeled | | | | Positioned Wrong | | | | |
| | Inspection Strip in Tube Cut Too Short | | | | | | | Misread | | | Power Loss | | _ | | Other |

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Ripples in Bend

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

Work Order ID: 98640 *98640* *646 4001* Parent Item: 646.4001 Parent Item Name: AS350 Cable Cutter **Start Date: 3/19/13** Required Date: 4/02/13 Start Qty: 1.00 Required Qty: 1.00 646,3715 0.0000 Manufactured No Each MS27039-1-12 Purchased No Each 235.0000 *MS27039-1-12* Location Loc Qty Loc Code Mezz 235 100993 100993 235 0.0000 No Each Manufactured n126083 Gauge Bracket MS20426AD5-7 865.0000 Purchased No Each Location Loc Qty Loc Code ST334 865 101340 865 Purchased No Each 95.0000 ** Loc Code Location Loc Qty ST303 123900 20 123900 124859 75

| | | | | | | | | | | | | DQA: | U | ate: | |
|---|-----------------------------|-----------------|------------|------|-----------|---|------------|---------|------------------|---|----------|-----------|--|------------------|---------------------------|
| NCR: Y | · | | | | | | | | | | | | | ate: | , |
| Work Orde | ·r· | | | | | DISPOSITION | | | <u> </u> | AGAINST D | | Closed: | | | |
| Part N | - . ۱٥۰ | | | | | Scrap Machining Small Fab Use-as-is Thermoforming Finishing Work Order Update Large Fab Composite | | | | Crosstube Small Fab Finishing Composite | R | | Water Je d. Eng. Coo e/Packagin Supplie | r | Engineering Quality Other |
| Root | | | | | Descri | ption of work order update | Ti | Initial | Act | tion | Si | gn & | | | |
| Cause | | Date | Step | Qty | (| or Non-conformance | Ch | ief Eng | Desc | ription | [| ate | Verificati | on | QC Inspector |
| Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved | | | | | | | | | | | | | | <u>,</u> | |
| | | | | | | F | AUL | T CATE | GORY | | | | | | |
| Landi | Ť | Gear Bending | | | Г | General Bend | | Grain | | | Toval | ized | | Γ | Pressure/Forced |
| | | ot Conce | ntric to | o/s | BOM/Route | H | Hardwa | re | | ⊣ | | tolerance | | Temperature/Cure | |
| | | | | | | Broken/Damaged | | 4 | on Incomplete | <u> </u> | ⊣ . | Incorre | | | Weld |
| | Crushed/Crimped Burrs | | | | | | | 1 | ions Incomplete/ | Unclear | Part | Lost/Mi | ssing | | Wrong Stock Pulled |
| | _ | Cuffs | • | | | Contamination | | | | Part | Moved | • | | • | |
| | | Heat Trea | at | | | Countersink | Mislabeled | | | Positioned Wrong | | | | _ | |
| | | Inspection | n Strip in | Tube | | Cut Too Short | Misread | | | Pow | er Loss/ | Surge | | Other | |
| | Ripples in Bend Drill Holes | | | | | | | Offset | | | | | | | |

Out of Calibration

Out of Sequence

Outside Dimensions

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

Picklist Print

March-19-13 10:52:30 AM

Work Order ID: 98640

98640

Parent Item:

MS27039-1-21

MS27039-1-20

MS27039-1-19

646.3717

646.4001

646 4001

Parent Item Name: AS350 Cable Cutter

Start Date: 3/19/13

Required Date: 4/02/13

Start Qty: 1.00

Required Qty: 1.00

387.0000

Loc Code

Purchased

Purchased

No

No

Location Loc Qty ST306 87 115935 87 ST506 300 300 124326 Each

500.0000



MS27039-1-20

Purchased No st510 124326

Location

500 500 Each

Loc Qty

Each

1.102.000

Loc Code

Loc Code





Screw

Manufactured No

Location Loc Oty ST306 102 122814 2 123522 100 ST506 1000 124326 1000

10.0000

**

Doubler

Location ST139A 93171 Loc Qty 10 10

Each

Loc Code

93171

| | | | | | | | | | | | DQA: | Dàte: | 1 |
|---------------|--|------------|-------------|------|--------|--|---------------------------------|--------------|---------------|-------------|---------------|---|---------------------------|
| NCR: | Yes | / No | | | | WORK ORDER NON-O | 100 | NFORM | ANCE / UPD | DATE | | | , |
| | | | | | | | | | | | QA Closed: | Date: | |
| Work Orde | er. | | | | | DISPOSITION | | | | AGAINST DE | PARTMENT | /PROCESS | |
| Part N | - No | | | | | Rework Skid-tube Crosstube Scrap Machining Small Fab Use-as-is Thermoforming Finishing Work Order Update Large Fab Composite | | | | | 4 | Water Jet d. Eng. Coor. re/Packaging Supplier | Engineering Quality Other |
| Root | Т | | | | Descri | ption of work order update | | nitial | Acti | ion | Sign & | | |
| Cause | | Date | Step | Qty | | or Non-conformance | 1 | ief Eng | Descri | | Date | Verification | QC Inspector |
| Doc/Data | | | | | | | | | | | | | |
| Equip/Tooling | | | | | | | | | | | | | |
| Operator | | | } | | | | | | | | | | |
| Material | | | | | | | | | | | | | |
| Setup | | | | , | | | | | | | | | |
| Other | | | | | • | | | | | | | | |
| Process | | | | | | | | | | | | | |
| Supplier | | | | | | | 1 | | | | | | |
| Training | | | | | | | | | | | | | |
| Unapproved | | | | | | | | | | | | | |
| | | | | | | F | AUL | T CATE | GORY | | | | ···- |
| Landi | ng G | ear | | | | General | | - | | | • | _ | - |
| | | Bending | | | | Bend | | Grain | | | Ovalized | | Pressure/Forced |
| | Centre Not Concentric to O/S BOM/Route | | | | | | | | re | | Over/Under | tolerance | Temperature/Cure |
| | Cracks Broken/Damaged | | | | | | | Inspecti | on Incomplete | | Part Incorred | t | Weld |
| | Ш | Crushed/ | Crimped | | | Burrs | Instructions Incomplete/Unclear | | | | Part Lost/Mi | ssing | Wrong Stock Pulled |
| | Ш | Cuffs | | | | Contamination | Maintenance | | | | Part Moved | | |
| : | Ш | Heat Trea | it | | | Countersink | Mislabeled | | | | Positioned V | - | |
| · · | \square | Inspection | n Strip in | Tube | | Cut Too Short | | Misread | | | Power Loss/ | Surge | Other |
| | | Ripples in | Bend | | | Drill Holes | | Offset | | | | | |

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

Work Order ID: 98640

Parent Item:

646.4001

Parent Item Name: AS350 Cable Cutter

98640

646 4001

Start Date: 3/19/13

Required Date: 4/02/13

Start Qty: 1.00

**

**

Required Qty: 1.00

646.3718

MS27039-1-10

Purchased

Manufactured

Manufactured

Location Loc Qty Loc Code ST139B 20 93289 20

No

No

No

Each

359.0000 **

0.0000

20.0000

Each

Each

Screw

Location Loc Qty Loc Code GA 100 120449 100 ST305 101 122815 124859 100 ST308 18 123522 18 ST506 140

140

124326

124326

| | | | | | | | | | | | DQA: | Dàte: | |
|--|------|------------|------------|------|-------------|---------------------------------------|------------|-------------------------------|-------------------------------|------------|--------------------------|---------------------------|--------------------|
| NCR: | Yes | / No | | ± | | WORK ORDER NON-C | 01 | NFORM | MANCE / UP | DATE | | | |
| | | | | · | ····· | · · · · · · · · · · · · · · · · · · · | | | | | QA Closed: | Date: | |
| Work Orde | er. | | | | | DISPOSITION | | | | AGAINST DE | PARTMENT | /PROCESS | |
| Part N | - | | | | | Rework Scrap Use-as-is | 1 | Skid-tube Machining noforming | Crosstube Small Fab Finishing | 4' | Water Jet od. Eng. Coor. | Engineering Quality Other | |
| NCR N | No. | | | | | Work Order Update | | | Large Fab | Composite |] | Supplier | |
| Root | | | | | Descri | ption of work order update | | Initial | Ac | tion | Sign & | | |
| Cause | | Date | Step | Qty | (| or Non-conformance | Ch | nief Eng | Desc | ription | Date | Verification | QC Inspector |
| Doc/Data | | | | | | | | - | | | | | |
| Equip/Tooling | | | | | | | 1 | | | | | | |
| Operator | | | | | | | | | | | | ļ | |
| Material | | | | | | | | | | | | | |
| Setup | | | | | | | | | | | | | |
| Other | | | | | | | | | | | | | |
| Process | | | İ | | | | | | | | | | |
| Supplier | | i | | | | | | | | | | | |
| Training | | | | | | | | | | | | | |
| Unapproved | | | | | | | | | | | | <u> </u> | |
| | | | | | | F | AUL | LT CATE | GORY | | | | |
| Landi | ng G | Gear | | | | General | | - | | | - | | • |
| Bending Bend | | | | | | | L | Grain | | | Ovalized | | Pressure/Forced |
| Centre Not Concentric to O/S BOM/Route | | | | | | BOM/Route | L | Hardwa | re | | Over/Under | tolerance | Temperature/Cure |
| Cracks | | | | | | Broken/Damaged | | Inspecti | on incomplete | | Part Incorre | ct | Weld |
| Crushed/Crimped Burrs | | | | | | Burrs | | Instruct | ions Incomplete/ | 'Unclear | Part Lost/M | issing | Wrong Stock Pulled |
| Cuffs | | | | | | Contamination | | Mainte | nance | | Part Moved | | |
| | П | Heat Trea | it | | Γ | Countersink | Mislabeled | | | | Positioned \ | | |
| | | Inspection | n Strip in | Tube | | Cut Too Short | Misread | | | | Power Loss, | /Surge | Other |

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Ripples in Bend

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

Work Order ID: 98640

98640

Parent Item:

646.4001

646 4001

Parent Item Name: AS350 Cable Cutter

Start Date: 3/19/13

Required Date: 4/02/13

Start Qty: 1.00

Required Qty: 1.00

Purchased

792.0000 Each

**

13-03-20

| Bolt | | | | | | | | | V |
|--|--------------------|-----|---------|----------|---|---------|----------|-----|----------------------|
| | | | Locatio | <u>n</u> | | Loc Qty | Loc Code | | |
| - O | | | ST351 | | | 192 | | | |
| 51 | | | | 110865 | | 42 | | | 24 110 865 |
| • //· | | | | 123525 | | 150 | | | 2+ 110 865 |
| | | | ST512 | | | 600 | | | |
| | | | | 115457 | | 100 | | | <u>-</u> |
| | | | | 123352 | | 200 | | | |
| | | | | 123759 | | 300 | | | |
| 600.0990 | Purchased | No | | • | | Each | 0.0000 | | |
| *600.0990* > M Magnabond 6398 Part A (One 4 oz can) | | | | | | | | ** | M125 UST C |
| 600: <u>0</u> 991 | Purchased | No | | | | Each | 0.0000 | | ~ |
| | Fuicitaseu | 110 | | | | Lacii | 0.0000 | .1 | EM126001 |
| *600-0991*) > M Magnabond 6398 Part B (One 4 oz can) | | | | | | | | ** | L/1)// 28087 |
| 600.1012 | Purchased | No | | | | Each | 0.0000 | | (T) |
| \$600-1012* 5MI) | | | | | | | | ** | 10.500 |
| © A-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1 | | | | | | | | ~ ~ | 125007 |
| Sealant (One 6 oz Semkit) | | ** | | | | | 0.0000 | | |
| 600.0129 | Purchased | No | | | | Each | 0.0000 | | |
| *600 0129*3 SM) | | | | | | | | ** | 135031 / 8 |
| VHB Tape | | | | | • | | | | |
| 600/1013 | 7 Purchased | No | | | | Each | 0.0000 | | |
| *600.1013* | | | | | | | | ** | M125164 (4/3/4/12(1) |
| Primer | | | | | | | | | of men |
| | | | | | | | | | |

| NCR: Yes / No WORK ORDER NON-CONFORMANCE / UPDATE | | | | | | | | | | | | | • |
|---|--|-------|------------|----------|----------|---|--------------------------|--|---|------------|---|---------------------------|---------------------------------------|
| | | | | | | | | | | | QA Closed: | Date: | |
| Work Orde | r: | | | | | DISPOSITION | | | | AGAINST DE | EPARTMENT | PROCESS | |
| Part N NCR N | 0 | | | | | Rework Scrap Use-as-is Work Order Update | Therm | Skid-tube Machining noforming Large Fab | Crosstube Small Fab Finishing Composite | ⊣ | Water Jet d. Eng. Coor. re/Packaging Supplier | Engineering Quality Other | |
| Root | | | | | Descri | ption of work order update | | nitial | Ac | tion | Sign & | | |
| Cause | Di | ite | Step | Qty | | or Non-conformance | Ch | ief Eng | Desc | ription | Date | Verification | QC Inspector |
| oc/Data quip/Tooling Operator Material etup Other | | | | | | | | | | | | | |
| rocess | _ | | | | | | 1 | | | | | | |
| upplier raining Inapproved | | | | | | | | | | | | | e di kujuli |
| | | | | <u> </u> | | ş | AUL | T CATE | GORY | | | | . |
| Landin | g Gear | - | | | | General | | | | | | | |
| | Ben | • | | | | Bend | | Grain | | | Ovalized | | Pressure/Forced |
| | Centre Not Concentric to O/S Cracks BOM/Route Broken/Damaged | | | | | | | 1 | on Incomplete | | Over/Under Part Incorred | t _ | Temperature/Cure Weld |
| Crushed/Crimped Burrs | | | | | | | - | 1 | ions Incomplete/ | Unclear | Part Lost/Mi | ssing | Wrong Stock Pulled |
| Contamination | | | | | | | _ | Mainte | | | Part Moved | | |
| ļ | | Trea | | | | Countersink | | Mislabe | | <u> </u> | Positioned V | _ | 1 |
| 1 | | | Strip in | Tube | <u> </u> | Cut Too Short | Misread Power Loss/Surge | | | Surge | Other | | |
| - | _ | | Bend | | <u> </u> | Drill Holes | \vdash | Offset | | | | | |
| | | - | aves in E | | n | Drawing | <u> -</u> | | Calibration | | | | · · · · · · · · · · · · · · · · · · · |
| | - -i | _ | equence | | L | Finish | Out of Sequence | | | | | | |
| | Wav | e/Twi | ist in Tub | e | | Folio | <u> </u> | Outside | Dimensions | | | | |

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Required Date: 4/02/13

Start Date: 3/19/13

March-19-13 10:52:30 AM

Work Order ID: 98640

98640

Parent Item:

646.4001

646 4001

Parent Item Name: AS350 Cable Cutter

| | | | | | : | Start Qty: 1.00 | Required Qty: 1.00 |
|--|--------------|----|------------------------------------|----------------------------|----------|-----------------|--------------------|
| 646.3910 * 646.39110 * Shim | Manufactured | No | | Each | 90.0000 | ** | JB ST |
| SHO | | | Location ST139d 93238 | Loc Oty 90 90 | Loc Code | 93238 | |
| 646.3911 * 646 3911 * Shim | Manufactured | No | | Each | 29.0000 | ** | y 6. |
| SHP | | | <u>Location</u> ST139d 93362 | Loc Qty 29 29 | Loc Code | 9336 | ð |
| *646.3912 *646.391.2* Shim | Manufactured | No | | Each | 91.0000 | ** | JB A |
| SMB | | | Location ST139d 93423 | <u>Loc Qty</u> 91 91 | Loc Code | 93423 | |
| *646.3913 *646.3913* Shim | Manufactured | No | | Each | 30.0000 | ** | JB 13-03-20 |
| 5m | | | Location ST139d 93160 | Loc Oty 30 30 | Loc Code | 93160 | |

| | | | | | | | | | | | | DQA: | Dà | ıte: | 1 |
|---------------|---|-----------|----------|----------|-------------|--------------------------------|--|------------|---------------------|------------------------|--------------------|------------|-------------------------|----------|------------------|
| NCR: | NCR: Yes / No WORK ORDER NON-CONFORMANCE / UPDATE | | | | | | | | | | | | | • | |
| | | _ | | | | | | | - | | Q | (A Closed: | Da | ite: | <u> </u> |
| Work Orde | er: | | | | | DISPOSITION | | | | AGAINST DE | EP# | ARTMENT | PROCESS | | |
| 1: | • | | | | | Rework | | | Skid-tube | Crosstube |] | | Water Jet | - | Engineering |
| Part i | ۱o. | | | | | Scrap | 1 | | Machining | Small Fab | 4 | | d. Eng. Coor. | - | Quality |
| NCR I | No. | | | | | Use-as-is Work Order Update | | | noforming Large Fab | Finishing Composite | | Rec/Stor | e/Packaging Supplier | \vdash | Other |
| Root | | | | | Descri | tion of work order update | Π | nitial | Ac | tion | T | Sign & | | | |
| Cause | | Date | Step | Qty | | or Non-conformance | Ch | ief Eng | Desc | ription | | Date | Verificatio | n | QC Inspector |
| Doc/Data | | | | | | | | | | · | Π | - | | | |
| Equip/Tooling | | |] | | | | | | } | | | | | | |
| Operator | | | | | | | | | | | | | | | |
| Material | | | | | | | | : | | | | | | | |
| Setup | | | <u> </u> | | | | | | | | | | | | |
| Other | | | | | | | 1 | | | | | | | | |
| Process | | | j | | : | | | | ļ | | | | | | |
| Supplier | | | | | | | | | | | | | | | |
| Training | | | | | | | | | | • | | | | | |
| Unapproved | | | | | | | | | | | | | | | . ** |
| | | | | | | F | AUL | T CATE | GORY | | | | | | <u> </u> |
| Landi | ng (| Gear | | | | General | _ | _ | | | _ | | | _ | 1 |
| Bending Bend | | | | | | | | Grain | | | Jo | valized | | | Pressure/Forced |
| | | Centre No | ot Conce | ntric to | o/s | BOM/Route | | Hardwa | re | | J٥ | ver/Under | tolerance | | Temperature/Cure |
| | | Cracks | | | | Broken/Damaged | Inspection Incomplete Part | | | art Incorrec | t | | Weld | | |
| | | Crushed/ | Crimped | | | Burrs | Instructions Incomplete/Unclear Part Lost/Miss | | ssing | | Wrong Stock Pulled | | | | |
| | | Cuffs | | | | Contamination | Maintenance Part Mov | | | art Moved | oved | | | | |
| | | Heat Trea | at | | | Countersink | Mislabeled | | | Positioned Wrong | | | | | |
| | Inspection Strip in Tube Cut Too Short | | | | | | | Misread Po | | | ower Loss/S | Surge | | Other | |

Offset

Out of Calibration
Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Order ID: 98640

Parent Item:

MS27039-1-16

646.4001

Parent Item Name: AS350 Cable Cutter

98640

646 4001

Start Date: 3/19/13

Required Date: 4/02/13

Start Qty: 1.00

Required Qty: 1.00

Purchased

No

Each 151.0000

**

Purchased

No

Location Loc Qty Loc Code GA 122407 6 ST351 45 114536 123352 44 ST512 100 100 123759

Each 106.0000

Location Loc Qty ST306 106 121444 6 122993 100 Loc Code

| | | | | | | | | | | | | DQA: | D | àte: | , |
|---------------|----------|------------------------------|------|-------------|----------------------------|----------------------------|----------|---------------------------------|------------|-----------|----|---------------|--------------|------|--------------------|
| NCR: | Yes | / No | | | | WORK ORDER NON- | COI | NFOR | MANCE / UP | PDATE | | | | | • |
| | | | | | | | | | | | | QA Closed: | D | ate: | |
| Work Order: | | | | DISPOSITION | AGAINST DEPARTMENT/PROCESS | | | | | | | | | | |
| VVOIR OIG | C1. | | | | | Rework | | Skid-tube Crosstube | | | ٦ | Water Jet | | | Engineering |
| Part | No. | | | | | Scrap | 1 | | Machining | Small Fab | 7 | Pro | d. Eng. Coor | _ | Quality |
| | | | | | | Use-as-is | 1 | 1 | noforming | Finishing | 7 | Rec/Stor | e/Packaging | g | Other |
| NCR | No. | | | | | Work Order Update |] | | Large Fab | Composite | | | Supplie | r | |
| Root | | | I | I | Descri | ption of work order update | T 1 | Initial | Δι | ction | Т | Sign & | | | |
| Cause | | Date | Step | Qty | | or Non-conformance | | nief Eng | | cription | | Date | Verificati | on | QC Inspector |
| Doc/Data | Г | Dute | эсер | αι, | | 77 Wolf Comormance | 1 | iici Eiig | | <u>p</u> | 十 | | | | що жереее. |
| Equip/Tooling | \vdash | | j | | | | | , | | | | | | | |
| Operator | | | | | | | | | | | | | | | |
| Material | | | | | | | | | | | İ | , | | | |
| Setup | | | İ | | | | | | | | 1 | | | | |
| Other | | | ļ | | | | | | | | 1 | | | | |
| Process | | 1 | İ | | ļ | | | | | , | 1 | | | | |
| Supplier | | | | | | | | | | | - | | | | |
| Training | L | | | | ļ | | | | | | | | | | |
| Unapproved | | | | | | | | | <u></u> | | 丄 | | | | |
| | | | | | | | AUI | LT CATE | GORY | | | | | | |
| Land | ing (| 7 | | | _ | General | | . | | F | _ | | | | l |
| | \vdash | Bending | | | | Bend | \vdash | Grain | | | - | Ovalized | | - | Pressure/Forced |
| | <u> </u> | Centre Not Concentric to O/S | | | o/s | BOM/Route | <u></u> | Hardware | | | - | Over/Under | | - | Temperature/Cure |
| | _ | Cracks | | | | Broken/Damaged | \vdash | Inspection Incomplete | | | - | Part Incorred | | - | Weld |
| | <u></u> | Crushed/Crimped | | | <u> </u> | Burrs | _ | Instructions Incomplete/Unclear | | | — | Part Lost/Mi | ssing | | Wrong Stock Pulled |
| | | Cuffs | | | <u> </u> | Contamination | \vdash | Mainte | | <u> </u> | - | Part Moved | | | |
| | <u></u> | Heat Tre | | | L | Countersink | <u> </u> | Mislabe | | | - | Positioned W | - | | l |
| | 1 | Inspection Strip in Tube | | | 1 | Cut Too Short | | Misread | į t | | Įf | Power Loss/S | Surge | | Other |

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

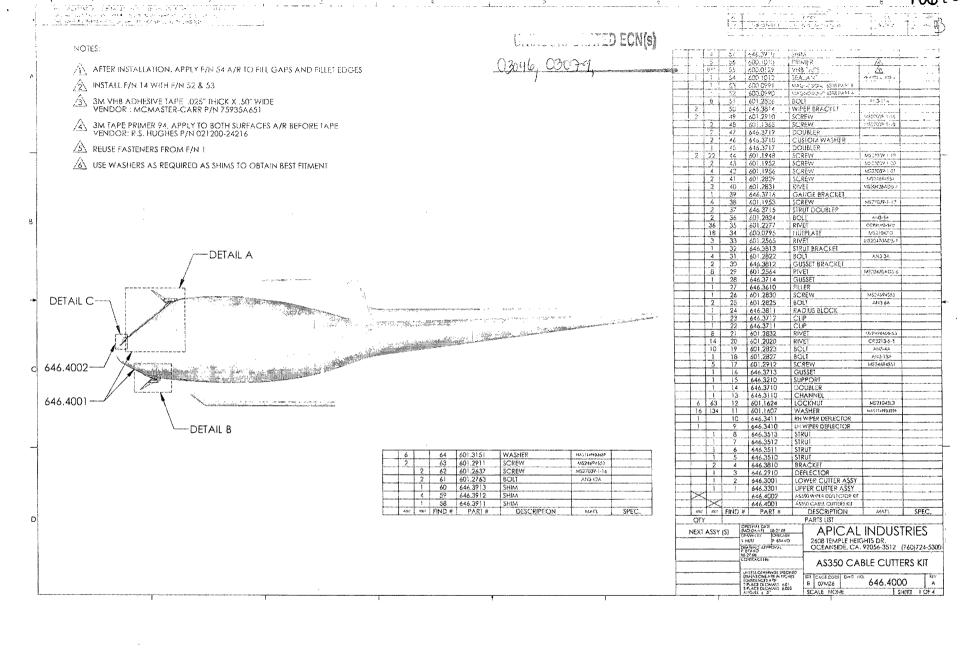
Drawing

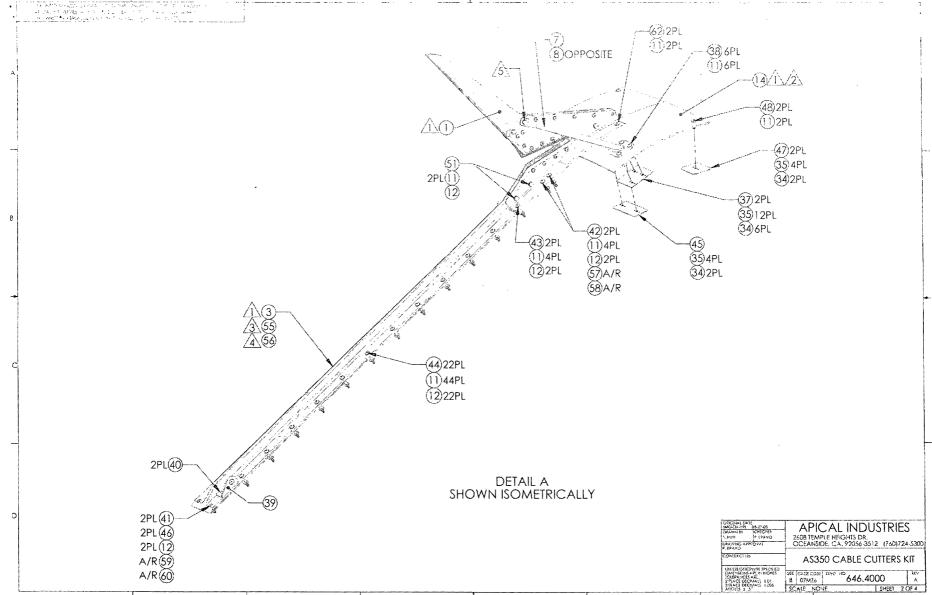
Finish Folio

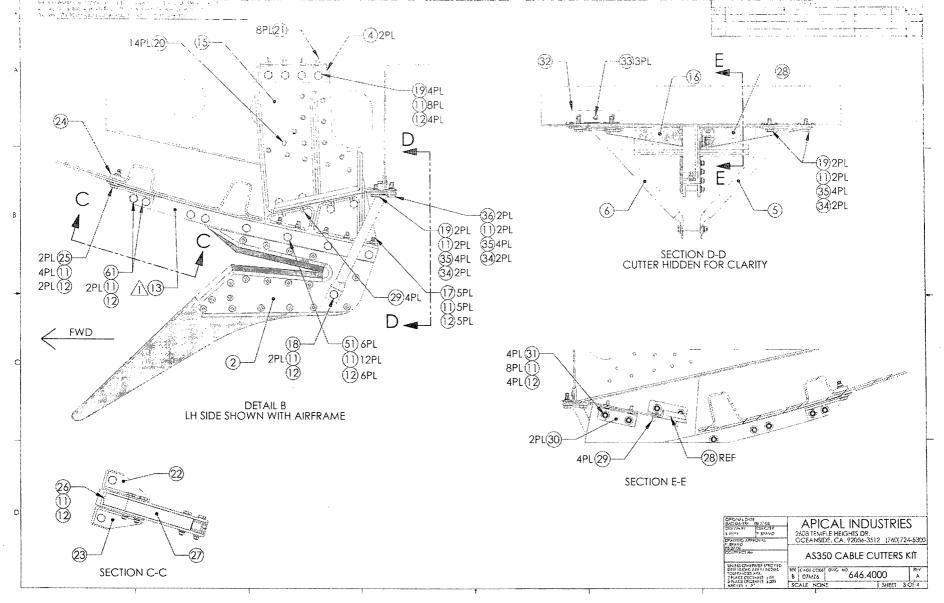
H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

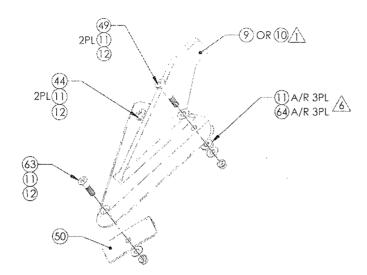
| | ENGINEERING CHANGE NOTICE NO | 03079 | SHEET 1 JF 1 |
|---|--|--|---|
| APICAL | DWG NO. 646.4000 REV: A | PREPARED N.CAP DATE: 03/2 | 1/11 EFFECT ON DWG: |
| INDUSTRIES, INC. | DWG TITLE: AS350 CABLE CUTTER | and the same of th | *** |
| | APPROVED BYI ENGR | without ac Mismeltera. | EFF' NEXT ORDER |
| TRANSACTION CODES (TC) A-ADD C-CREATE R-REVISE D-DELETE | REASON CREATED FIXED AND CCK | WITHOUT FIXED PROVISIONS H | <it< td=""></it<> |
| SHEET 1, | UNCON- SUBJECT W. 986 40 13-0 13-0 REF REF REF 65 647.5701 CPS MOUNT KIT MOUNT K | 1 | SSE PART MC-IIA MC-IIA MC-IIA MC-IIA MC-IIA MSZ7039-1-18 MSZ7039-1-19 MSZ7039-1-19 MSZ7039-1-21 MSZ7039-1-21 MSZ7039-1-21 MSZ7039-1-22 MSZ7039-1-22 MSZ7039-1-22 MSZ7039-1-22 MSZ7039-1-22 MSZ7039-1-22 MSZ7039-1-22 MSZ7039-1-22 MSZ7039-1-22 MSZ7039-1-22 MSZ7039-1-2 MSZ7039-1-2 MSZ7039-1-2 MSZ7039-1-2 MSZ7039-1-2 MSZ7039-1-3 |
| DOCUMENTS EFFECTED: | MDL W INSTALL INSTRUC W | | REVIEW REQUIRED YES Ø NO |

| ENGINEERING CHANGE NOTICE NO. 03 | | | | | | | | | | |
|---|---|--|--|--|--|--|--|--|--|--|
| APTCAI DWG NO. 646.4000 REV: A PREPARED J. | . JACKSON DATE: 01/24/11 EFFECT ON DWG | | | | | | | | | |
| INDUSTRIES, INC. DWG TITLE: AS350 CABLE CUTTERS KI | | | | | | | | | | |
| APPROVED BY: ENGR Branci MFG Davy Bulon | OC Manuel Legan EFF: NEXT ORDER | | | | | | | | | |
| TRANSACTION CODES (TC): REASON: ADDED GPS MOUNT KIT, F/N 65. REVI A-ADD C-CREATE ADDED NOTE 7. | ISED DRAWING VIEWS! | | | | | | | | | |
| SHEET 1, ZONE B1 IS: | | | | | | | | | | |
| /7) AT CUSTOMERS OPTION, INSTALL F/N 65 BY MATCH DRILLING ONTO F/N 1. | | | | | | | | | | |
| 51 | JEET 3 70ME DO IS: | | | | | | | | | |
| SHEET 2, ZONE A4 IS: | | | | | | | | | | |
| DETAIL D 8 OPPOSITE | REF (65) (1) | | | | | | | | | |
| REF | | | | | | | | | | |
| 2PL 11) | PICAL GPS MOUNT KIT INSTALLATION | | | | | | | | | |
| 65 A 647.5701 REF GPS MDUNT KIT | \triangle | | | | | | | | | |
| F/N TC PART NUMBER 01Y DESCRIPTION | MATERIAL SPECIFICATION | | | | | | | | | |
| DOCUMENTS EFFECTED: | CHANGE CATEGORY DER REVIEW REQUIRED MAJOR & MINOR OF YES & NO. | | | | | | | | | |









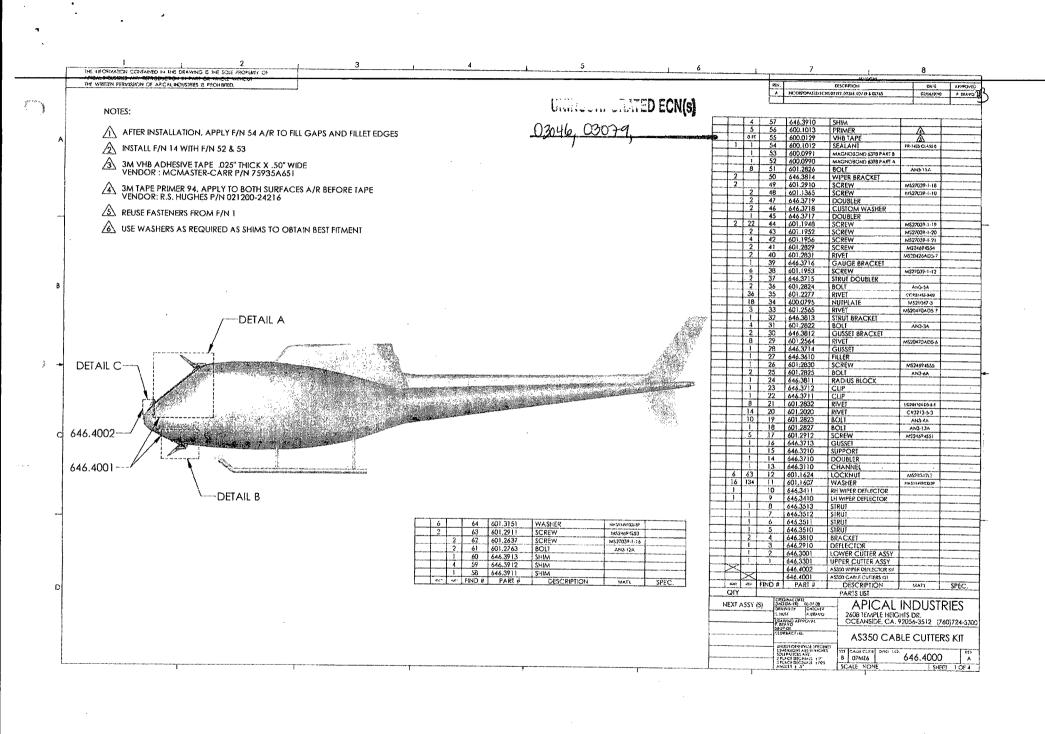
DETAIL C LH SHOWN EXPLODED RH OPPOSITE

APICAL INDUSTRIES
2608 1EMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (750)724-5300

AS350 CABLE CUTTERS KIT

| SCALE NONE | SHEEL 4 OF 4

| ENGINEERING CHANGE NOTICE NO. 03079 SHEET 1 JF 1 |
|--|
| APICAL DWG NO. 646,4000 REVI A PREPARED N.CAP DATE: 03/21/11 EFFECT ON DWG DINC. W UNINC. |
| INDUSTRIES, INC. DWG TITLE: AS350 CABLE CUTTERS KIT |
| APPROVED BY ENGR BAND MFG Dave Barbon QC Ursurel Sera EFFI NEXT ORDER |
| TRANSACTION CODES (TC): A-ADD C-CREATE REASON: CREATED FIXED AND CCK WITHOUT FIXED PROVISIONS KIT R-REVISE D-DELETE |
| SHEET 1, BOM, ISI SHEET 1, BOM, |
| DOCUMENTS EFFECTED: CHANGE CATEGORY DER REVIEW REQUIRED DISTALL INSTRUC IN ICA IN BOM DI MAJOR IN MINOR DI YES IN NO |



1. Approving National Aviation 3. Form Tracking Number: Page 1 of 3 Authority/Country: **AUTHORIZED RELEASE CERTIFICATE** MG13-078 **AA/UNITED STATES FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG 4. Organization Name and Address: 5. Work Order/Contract/Invoice Number: Apical Industries, Inc. Shipper # 12443 2608 Temple Heights Drive PO1886NM P.O. # AS350-CCK/PO 1933 1 Oceanside, CA 92056 Item: 7. Description: 8. Part Number: Eligibility: * 10. **Ouantity:** 11. Serial/Batch Number: Status/Work: 12. 1. **Upper Cutter Assy** 646.3301 16 119640-3 New Lower Cutter Assy 646.3001 20 119737-1 3. Deflector 646.2910 17 119572-1 Doubler 646.3710 2 113434-1 Strut Doubler 646,3715 2 114916-7 Gusset 646.3714 113434-3 Doubler 646.3715 113434-4 Shim 646.3911 113080-5 Gusset 646.3713 113434-2 10. Bracket 646.3810 113012-4 11. Support 646,3210 114263-3 12. **Gusset Bracket** 646,3812 113579-1 Strut Bracket 646:3813 車112165-3 14. Shim 646.3910 26 114916-5 15. Shim 646.3912 26 114916-6 16. Channel 646,3110 118257-8 13. Remarks: **EXPORT AIRWORTHINESS APPROVAL** A. These parts listed in Block 7. are subcomponents of a PMA Article B. Bilaterial Agreement - None C. Items are being shipped to Dart Aerospace Ltd. in Hawkesbury, ON, Canada. D. Last item entered.... 14. Certifies the items identified above were manufactured in conformity to: Approved design data and are in condition for safe operation Non-approved design data specified in Block 13. 15. Authorized Signature 16. Approved/Authorization No.: **DMIR 606259-NM** 17. Name (Typed or Printed): 18. Date (m/d/y): Lisa Mansfield March 18, 2013 User/Installer Responsibilities It is important to understand that the existence of this document alone does not automatically constitute authority to install the part/component/assembly. Where the user/installer performs work in accordance with the national regulations of an airworthiness authority different that the airworthiness authority of the country specified in Block 1, it is essential that the user/installer ensures that his/her airworthiness accepts parts/components/assemblies from the airworthiness authority of the country specified in Block 1.

FAA Form 8130-3(6-01)

user/installer before the aircraft may be flown.

Statements in Blocks 14 and 19 do not constitute installation certification. In all cases, aircraft maintenance records must contain an installation certification issued in accordance with the national regulations by the

1. Approving National Aviation 3. Form Tracking Number: Page 2 of 3 Authority/Country: **AUTHORIZED RELEASE CERTIFICATE** MG13-078 SAA/UNITED STATES FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG 4. Organization Name and Address: 5. Work Order/Contract/Invoice Number: Apical Industries, Inc. **Shipper # 12443** 2608 Temple Heights Drive PO1886NM P.O. # AS350-CCK/V0 (9 3 3) Oceanside, CA 92056 Item: 7. **Description:** 8. Part Number: Eligibility: * Quantity: 11. Serial/Batch Number: 12. Status/Work: 17. Strut 646.3512 N/A 12 111971-3 New 18. Doubler 646,3719 24 117341-6 Strut=== 646.3510 117341=2 20. Strut 646.3511 14 117341-3 21. Clip 646.3711 13 117341-1 22. Clip 646.3712 13 117341-4 23. **Custom Washer** 646.3718 27 117341-5 24. Gauge Bracket 646.3716 15 117953-1 25. Filler 646,3610 17 115914-2 26. Shim 646.3913 17 117953-2 27. Radius Block 646.3811 20 117651-1 28. Strut 646,3513 35 11971-1, 115105-1, 115741-3 29. Bolt 601.2825 192 107245-1, 119183-2 30. Bolt 601,2827 69 106824-1, 114455-1 31. Bolt 601.2763 206 41764-3, 46468-1 32. Screw 601.2830 41769-8, 107245-8 13. Remarks: **EXPORT AIRWORTHINESS APPROVAL** A. These parts listed in Block 7. are subcomponents of a PMA Article B. Bilaterial Agreement - None C. Items are being shipped to Dart Aerospace Ltd. in Hawkesbury, ON, Canada. D. Last item entered..... 14. Certifies the items identified above were manufactured in conformity to: Approved design data and are in condition for safe operation Non-approved design data specified in Block 13. 15. Authorized Signature: 16. Approved/Authorization No.: **DMIR 606259-NM** 17. Name (Typed or Printed): 18. Date (m/d/y): Lisa Mansfield March 18, 2013 User/Installer Responsibilities It is important to understand that the existence of this document alone does not automatically constitute authority to install the part/component/assembly.

Where the user/installer performs work in accordance with the national regulations of an airworthiness authority different that the airworthiness authority of the country specified in Block 1, it is essential that the user/installer ensures that his/her airworthiness accepts parts/components/assemblies from the airworthiness authority of the country specified in Block 1.

Statements in Blocks 14 and 19 do not constitute installation certification. In all cases, aircraft maintenance records must contain an installation certification issued in accordance with the national regulations by the user/installer before the aircraft may be flown.

| | ng National Aviation ority/Country: | 2. | DELEACE | CEDOID | | 3. Form Tracking | g Number: | Page 3 of 3 | | | |
|---------------------------------|---|--|--|-----------------------------|---|---|-------------|--------------------------------|--|--|--|
| . FAA/U | NITED STATES | | AUTHORIZED RELEASE CERTIFICATE FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG | | | | | MG13-078 | | | |
| Apical In 2608 Ten | tion Name and Address: ndustries, Inc. nple Heights Drive le, CA 92056 | PQ1886NM | | | | 5. Work Order/6 Shipper # 12443 P.O. # AS350-C6 | | | | | |
| 6. Item: | 7. Description: | 8. Part Number: | 9. Eligibility: * | 10. Quantity: | 11. Serial/B | atch Number: | 12. | Status/Work: | | | |
| 33. 34. 35. 36. 37. | Rivet LH Wiper Deflector AS350 Wiper deflector Kit RH Wiper Deflector Wiper Bracket | 601.2831 646.3410 646.4002 646.3411 646.3814 | N/A | 604 15 4 16 45 | 76557-10, 107245 110777-1 031, 032, 033, 03 118480-1 107056-3, 116390 | 5-7, 115478-4 4 | New | | | | |
| 13. Remarks: | A. These parts liB. Bilaterial AgrC. Items are bein | THINESS APPROVAL sted in Block 7. are subcompone reement – None ng shipped to Dart Aerospace Ltd ered | l. in Hawkesbury, O | N, Canada. | •••••• | | | •••••• | | | |
| 14. Certifie | es the items identified a | bove were manufactured in conform | ita to | | | | · . | | | | |
| | | d are in condition for safe operation | iiiy to. | | | | | | | | |
| □ No | n-approved design data | a specified in Block 13. | adilibito - | | | | | | | | |
| 15. Author | ized Signature: | 16. Approved/Authorization DMIR 606259-NM | on No.: | | | | | | | | |
| | Typed or Printed): | 18. Date (m/d/y): | : 1. | | | | | | | | |
| Lisa Mansi | field | March 18, 2013 | | | | | : | , | | | |
| · · | | | ser/Installer Respo | | | | | | | | |
| Where the u specified in I | ser/installer performs v | the existence of this document alone of the existence of this document alone of the work in accordance with the national the user/installer ensures that his | l regulations of an air | vorthiness authority (| different that the | e airworthiness | authority | of the country ority of the | | | |
| Statements in accordance v | n Blocks 14 and 19 do i | not constitute installation certificatio ations by the user/installer before the | on. In all cases, aircra e aircraft may be flow | ft maintenance record 1. | ls must contain a | an installation c | ertificatio | n issued in | | | |